

Chemical reactions

Task 1: Read and highlight:

An element is a substance made from one type of atom. A compound is a substance made from two or more types of atom chemically bonded together. During a chemical change substances are changed into new substances. Their atoms are rearranged. This is a irreversible change that cannot be changed back.

During a physical change the substances are not altered chemically. No new products are formed. Chemical bonds are not broken in a physical change

A physical change can affect the size, shape or colour of a substance but does not affect its composition. The substances may be changed to another phase (i.e. gas, liquid, solid) or separated or combined.

Reactions that give out heat are called EXOthermic reactions (think exit). Those that take in heat are called ENDOthermic reactions.

Salts are made when a metal reacts with an acid or during a neutralisation reaction. The name of the salt depends upon the acid used - Hydrochloric acid produces Chloride salts, Nitric acid produces Nitrate salts and Sulphuric acid produces Sulphate salts.

E.g Magnesium + Hydrochloric acid \rightarrow Magnesium Chloride (salt) + Hydrogen.

Magnesium + Sulphuric acid \rightarrow Magnesium Sulphate (salt) + Hydrogen.

Magnesium + Nitric acid \rightarrow Magnesium Nitrate (salt) + Hydrogen.

A neutralisation reaction occurs between an acid and a base. Metal oxides and metal hydroxides are examples of bases.

Task 2: Write a definition of the following keywords

Element

Compound

Reversible change

Irreversible change

Physical change

Chemical change

Salt

Acid

Base

Oxide

Chloride

Sulphate

Nitrate

Task 3: complete the following reactions

Metal and oxygen

1. Copper + oxygen → _____



2. Magnesium + oxygen → _____



3. Lithium + oxygen → _____

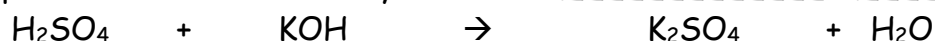


Acid + base

1. Hydrochloric acid + Sodium Hydroxide → _____ + Water

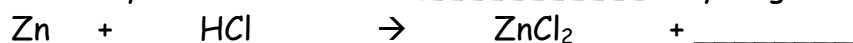


2. Sulphuric acid + Potassium Hydroxide → _____ + _____

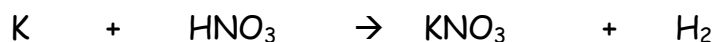


Metal + Acid

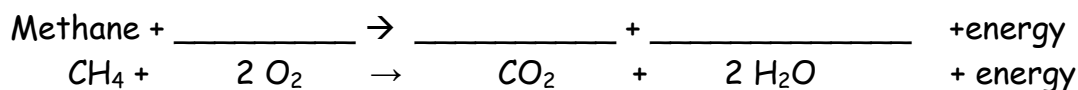
1. Zinc + Hydrochloric Acid → _____ + Hydrogen



2. Potassium + Nitric acid → _____ + _____



Combustion



Chemical reactions

S E V H F U U P U X J J D G N
U N L E L B I S R E V E R R I
L B E B Z L Z P Z O C E G F A
P H Y S I C A L M O W S N D W
H C A R G S E M M W R I I O M
A L H J E G R P R E Q L N X K
T E B E N D O E S E E A R I R
E C S A M S U I V C H R U D S
G O H A I I L C H E G T B E B
B C D T B I C L E E R U U T S
Q B I C T F O A R J D E N R F
N O W R L R P R L Y X N F P T
N X E L I E T A R T I N U A Y
Z F F D A L K A L I D I C A T
U I E W E T A H Q O M N A H Z

ACID

BURNING

CHLORIDE

IRREVERSIBLE

OXIDE

REVERSIBLE

ALKALI

CHANGE

DECOMPOSITION

NEUTRALISE

PHYSICAL

SALT

BASE

CHEMICAL

FERTILISER

NITRATE

REDUCE

SULPHATE